



SECURITIES AND EXCHANGE COMMISSION
(Release No. 34-82631; File No. SR-NSCC-2017-808)

February 5, 2018

Self-Regulatory Organizations; National Securities Clearing Corporation; Notice of Filing of Advance Notice, as Modified by Amendment No. 1, to Enhance the Calculation of the Volatility Component of the Clearing Fund Formula that Utilizes a Parametric Value-at-Risk Model and Eliminate the Market Maker Domination Charge

Pursuant to Section 806(e)(1) of Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act entitled the Payment, Clearing, and Settlement Supervision Act of 2010 (“Clearing Supervision Act”)¹ and Rule 19b-4(n)(1)(i) under the Securities Exchange Act of 1934, as amended (“Act”),² notice is hereby given that on December 28, 2017, National Securities Clearing Corporation (“NSCC”) filed with the Securities and Exchange Commission (“Commission”) the advance notice SR-NSCC-2017-808. On January 10, 2018, NSCC filed Amendment No. 1 to the advance notice.³ The advance notice, as modified by Amendment No. 1 (hereinafter, the “Advance Notice”) is described in Items I, II and III below, which Items have been prepared by the clearing agency.⁴ The Commission is publishing this notice to solicit comments on the Advance Notice from interested persons.

¹ 12 U.S.C. 5465(e)(1).

² 17 CFR 240.19b-4(n)(1)(i).

³ In Amendment No. 1 to the advance notice, NSCC amended and replaced in its entirety the originally filed confidential Exhibit 3a with a new confidential Exhibit 3a in order to remove references to a practice that is not to be considered as part of this filing.

⁴ On December 28, 2017, NSCC filed this Advance Notice as a proposed rule change (SR-NSCC-2017-020) with the Commission pursuant to Section 19(b)(1) of the Act, 15 U.S.C. 78s(b)(1), and Rule 19b-4 thereunder, 17 CFR 240.19b-4. On January 10, 2018, NSCC filed Amendment No. 1 to the proposed rule change to amend and replace in its entirety the originally filed confidential Exhibit 3a

I. Clearing Agency's Statement of the Terms of Substance of the Advance Notice

The advance notice of NSCC consists of modifications to NSCC's Rules & Procedures ("Rules")⁵ in order to enhance the calculation of the volatility component of the Clearing Fund formula that utilizes a parametric Value-at-Risk ("VaR") model ("VaR Charge") by (1) adding an additional calculation utilizing the VaR model that incorporates an evenly-weighted volatility estimation, which would supplement the current calculation that utilizes the VaR model but incorporates an exponentially-weighted moving average ("EWMA") volatility estimation,⁶ where the higher of the two calculations would be the core parametric result ("Core Parametric Estimation"); and (2) introducing two additional formulas to the calculation of the VaR Charge – the Gap Risk Measure and the Portfolio Margin Floor, where the results of these two calculations would be compared to the Core Parametric Estimation and the highest of the three would be a Member's final VaR Charge, as described in greater detail below.

NSCC is also proposing to eliminate the existing Market Maker Domination component ("MMD Charge") from the Clearing Fund formula, as described in greater detail below.

with a new confidential Exhibit 3a in order to remove references to a practice that is not to be considered as part of this filing. A copy of the proposed rule change, as modified by Amendment No. 1, is available at <http://www.dtcc.com/legal/sec-rule-filings>.

⁵ Capitalized terms not defined herein are defined in the Rules, available at http://dtcc.com/~media/Files/Downloads/legal/rules/nscc_rules.pdf.

⁶ As described in greater detail in the filing, an EWMA volatility estimation is an estimation of volatility that gives more weight to most recent market observations, where an evenly-weighted volatility estimation is an estimation of volatility that gives even weight to historic market observations.

II. Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Advance Notice

In its filing with the Commission, the clearing agency included statements concerning the purpose of and basis for the Advance Notice and discussed any comments it received on the Advance Notice. The text of these statements may be examined at the places specified in Item IV below. The clearing agency has prepared summaries, set forth in sections A and B below, of the most significant aspects of such statements.

(A) Clearing Agency's Statement on Comments on the Advance Notice Received from Members, Participants, or Others

While NSCC has not solicited or received any written comments relating to this proposal, NSCC has conducted outreach to Members in order to provide them with notice of the proposal. NSCC will notify the Commission of any written comments received by NSCC.

(B) Advance Notice Filed Pursuant to Section 806(e) of the Clearing Supervision Act

Description of Proposed Changes

NSCC is proposing to enhance the calculation of the VaR Charge by introducing an additional estimation of volatility that would be incorporated into the VaR model, and introducing two additional calculations, the Gap Risk Measure and the Portfolio Margin Floor, that NSCC believes would collectively enhance its ability to mitigate market price risk. NSCC currently calculates the VaR Charge by applying a parametric VaR model that incorporates an EWMA volatility estimation. NSCC is proposing to introduce an additional calculation that also applies the parametric VaR model but replaces the EWMA volatility estimation with an evenly-weighted volatility estimation.⁷ The result

⁷ See id.

of these two calculations using the parametric VaR model would be compared and the higher of the two would be the Core Parametric Estimation.

NSCC is also proposing to introduce two additional calculations to arrive at a final VaR Charge, the Gap Risk Measure and the Portfolio Margin Floor. NSCC would use the highest result between the Core Parametric Estimation, the Gap Risk Measure, when applicable, and the Portfolio Margin Floor calculations as a Member's final VaR Charge.⁸

Each of the separate calculations would provide NSCC with a measure of the market price risk presented by the Net Unsettled Positions and Net Balance Order Unsettled Positions (for purposes of this filing, referred to collectively herein as "Net Unsettled Positions")⁹ in a Member's portfolio. Collectively, the proposed enhancements to the calculation of the VaR Charge would permit NSCC to more effectively cover its credit exposures and produce margin levels commensurate with the risks and particular attributes of each Member's portfolio, as described in greater detail below.

NSCC is also proposing to eliminate the existing MMD Charge from the Clearing Fund formula. When the MMD Charge was first introduced, it was developed to only address concentration risks presented by Net Unsettled Positions in certain securities that are traded by firms that are designated Market Makers, as described in greater detail below. Given this limited scope of application of this charge, and because NSCC

⁸ NSCC may calculate Members' VaR Charge on an intraday basis for purposes of monitoring the risks presented by Members' activity. These calculations would be also be performed using the proposed enhanced methodology.

⁹ "Net Unsettled Positions" and "Net Balance Order Unsettled Positions" refer to net positions that have not yet passed their settlement date, or did not settle on their settlement date. See Procedure XV (Clearing Fund Formula and Other Matters) of the Rules, supra note 4.

believes it more effectively addresses the risks this charge was designed to address through other risk management measures, including the proposed Gap Risk Measure calculation of the VaR Charge, NSCC is proposing to eliminate the MMD Charge.

Each of these proposed changes is described in more detail below.

(i) *Overview of the Required Deposit and NSCC's Clearing Fund*

As part of its market risk management strategy, NSCC manages its credit exposure to Members by determining the appropriate Required Deposits to the Clearing Fund and monitoring its sufficiency, as provided for in the Rules.¹⁰ The Required Deposit serves as each Member's margin. The objective of a Member's Required Deposit is to mitigate potential losses to NSCC associated with liquidation of such Member's portfolio in the event that NSCC ceases to act for such Member (hereinafter referred to as a "default").¹¹ The aggregate of all Members' Required Deposits constitutes the Clearing Fund of NSCC, which it would access should a defaulting Member's own Required Deposit be insufficient to satisfy losses to NSCC caused by the liquidation of that Member's portfolio.

Pursuant to NSCC's Rules, each Member's Required Deposit amount consists of a number of applicable components, each of which is calculated to address specific risks

¹⁰ See Rule 4 (Clearing Fund) and Procedure XV (Clearing Fund Formula and Other Matters), supra note 4. NSCC's market risk management strategy is designed to comply with Rule 17Ad-22(e)(4) under the Act, where these risks are referred to as "credit risks." 17 CFR 240.17Ad-22(e)(4).

¹¹ The Rules set out the circumstances under which NSCC may cease to act for a Member and the types of actions it may take. For example, NSCC may suspend a firm's membership with NSCC or prohibit or limit a Member's access to NSCC's services in the event that Member defaults on a financial or other obligation to NSCC. See Rule 46 (Restrictions on Access to Services) of the Rules, supra note 4.

faced by NSCC, as identified within Procedure XV of the Rules.¹² The volatility component of each Member's Required Deposit is designed to measure market price volatility and is calculated for Members' Net Unsettled Positions. The volatility component is designed to capture the market price risk associated with each Member's portfolio at a 99th percentile level of confidence. The VaR Charge is the volatility component applicable to most Net Unsettled Positions,¹³ and usually comprises the largest portion of a Member's Required Deposit. Procedure XV of the Rules currently provides that the VaR Charge shall be calculated in accordance with a generally accepted portfolio volatility margin model utilizing assumptions based on reasonable historical data and an appropriate volatility range.¹⁴ As such, NSCC currently calculates a Member's VaR Charge utilizing the VaR model, which incorporates an EWMA volatility estimation.

Currently, Members' Required Deposits may also include an MMD Charge, applicable only to Members that are Market Makers and Members that clear for Market Makers.¹⁵ As described in greater detail below, the MMD Charge is imposed when these

¹² Supra note 4.

¹³ As described in Procedure XV, Section I(A)(1)(a)(ii) and (iii) and Section I(A)(2)(a)(ii) and (iii) of the Rules, Net Unsettled Positions in certain securities are excluded from the VaR Charge and instead charged a volatility component that is calculated by multiplying the absolute value of those Net Unsettled Positions by a percentage. Supra note 4.

¹⁴ Procedure XV, Section I(A)(1)(a)(i) and Section I(A)(2)(a)(i) of the Rules, supra note 4.

¹⁵ As used herein, "Market Maker" means a member firm of the Financial Industry Regulatory Authority, Inc. ("FINRA") that is registered by FINRA as a Market Maker pursuant to FINRA's rules, available at <http://finra.complinet.com/en/display/display.html>.

Members hold a Net Unsettled Position that is greater than 40 percent of the overall unsettled long position (sum of each clearing broker's net long position) in that security in the Continuous Net Settlement ("CNS") system.¹⁶

NSCC employs daily backtesting to determine the adequacy of each Member's Required Deposit. NSCC compares the Required Deposit¹⁷ for each Member with the simulated liquidation gains/losses using the actual positions in the Member's portfolio, and the historical security returns. NSCC investigates the cause(s) of any backtesting deficiencies. As part of this investigation, NSCC pays particular attention to Members with backtesting deficiencies that bring the results for that Member below the 99 percent confidence target (i.e., greater than two backtesting deficiency days in a rolling twelve-month period) to determine if there is an identifiable cause of repeated backtesting deficiencies.

Further, as a part of its model performance review, and consistent with its regulatory requirements, NSCC regularly assesses its risks as they relate to its model assumptions, parameters, and sensitivities, including those of its parametric VaR model, to evaluate whether margin levels are commensurate with the particular risk attributes of each relevant product, portfolio, and market.¹⁸ As part of NSCC's model performance monitoring, NSCC management analyzes and evaluates the continued effectiveness of its parametric VaR model in order to identify any weaknesses, and determine whether, and

¹⁶ See Rule 11 (CNS System) and Procedure VII (CNS Accounting Operation), supra note 4.

¹⁷ For backtesting comparisons, NSCC uses the Required Deposit amount without regard to the actual collateral posted by the Member.

¹⁸ See 17 CFR 240.17Ad-22(e)(6)(i), (vi).

which, enhancements may be necessary to its formulas, parameters or assumptions to improve margin coverage.

The proposed changes to the calculation of the VaR Charge, described below, are a result of NSCC's regular review of the effectiveness of its margining methodology.

(ii) *Enhancements to the VaR Charge*

Adding an Evenly-Weighted Volatility Estimation to the VaR Model. To calculate the VaR Charge, NSCC uses a parametric VaR model that currently only incorporates an EWMA volatility estimation. The EWMA volatility estimation is considered front-weighted as it assigns more weight to most recent market observations based on the assumption that the most recent price history would have more relevance to, and therefore is a better measure of, current market price volatility levels. A calculation using this EWMA volatility estimation is responsive to changing market volatility, and, because NSCC's Member-level model backtesting results have generally remained above a 99th percentile level of confidence over a 10-year performance window, NSCC believes this calculation continues to be an effective measurement of price volatility for the majority of Net Unsettled Positions that are subject to the VaR Charge. More specifically, NSCC believes its backtesting results show that this calculation has been proven to be effective for calculating the price volatility of large diversified portfolios, which represent the majority of Net Unsettled Positions that are subject to the VaR Charge.

However, NSCC believes this calculation may not adequately cover a rapid change in market price volatility levels, including, for example, a drop in portfolio

volatility in a stabilizing market. Additionally, NSCC has observed poorer backtesting coverage for those Members with less diversified portfolios in atypical market conditions.

In estimating volatility, the EWMA volatility estimation gives greater weight to more recent market observations, and effectively diminishes the value of older market observations. However, volatility in equity markets often rapidly revert to pre-volatile levels, and then are followed by a subsequent spike in volatility. So, while a calculation that relies exclusively on the EWMA volatility estimation can capture changes in volatility that emerge from a progressively calm or non-volatile market, it may cause a reactive decrease in margin that does not adequately capture the risks related to a rapid shift in market price volatility levels. Alternatively, an evenly-weighted volatility estimation would continue to give even weight to all historical volatility observations in the look-back period (described below), and would prevent margin from decreasing too quickly.

Therefore, in order to more adequately cover a rapid change in market price volatility levels and the risks presented by less diversified portfolios in its calculation of the VaR Charge, NSCC is proposing to add another calculation of the VaR Charge utilizing its parametric VaR model that would incorporate an evenly-weighted volatility estimation. NSCC believes an additional calculation using a volatility estimation that gives even weight to market observations over a set look-back period would allow it to more adequately address risks related to a rapid shift in general market price volatility levels, which can occur as a result of either idiosyncratic, issuer events (also referred to

as “gap risk events”),¹⁹ or are due to specific characteristics of a Member’s portfolio based on their size, balance, direction, concentration, or the degree of correlation with broad market returns.

The proposed calculation incorporating an evenly-weighted volatility estimation would give equal weight to price observations over a look-back period of at least 253 days. NSCC analyzed the impact of using a look-back period of various lengths and determined that a look-back period of at least 253 days would provide NSCC with an adequate view of recent, past market observations in estimating volatility to meet its backtesting performance targets, and wouldn’t result in unnecessarily high margin calculations. NSCC would weigh these considerations periodically to determine an appropriate look-back period that is at least 253 days.

NSCC would perform both calculations using the parametric VaR model – one using the existing EWMA volatility estimation and an additional calculation using the proposed evenly-weighted volatility estimation – and would use the highest result of these calculations as the Core Parametric Estimation in connection with calculating a Member’s VaR Charge. NSCC believes that, while the existing EWMA calculation provides adequate responsiveness to increasing market volatility, as described above, the proposed evenly-weighted calculation would be better at covering the risk of a rapid change in market volatility levels by retaining market observations from the entire historical data set. Therefore, by using both calculations and selecting the higher result, NSCC would be able to more effectively cover its credit exposures and mitigate the risk

¹⁹ Gap risk events may include, for example, earning reports, management changes, merger announcements, insolvency, or other unexpected, issuer-specific events.

presented by different market conditions in arriving at a final Core Parametric Estimation.

In order to implement the proposed change, NSCC would amend Procedure XV of the Rules by creating a new subsection (I) to Sections I(A)(1)(a)(i) and I(A)(2)(a)(i) of the Rules, which would define the Core Parametric Estimate as the higher result of two calculations – and EWMA calculation and the proposed evenly-weighted calculation – both utilizing the parametric VaR model.

Gap Risk Measure. NSCC is also proposing to introduce the Gap Risk Measure as an additional calculation that, when applicable, would be used to determine a Member's final VaR Charge.

The proposed Gap Risk Measure would be calculated to address the risks presented by a portfolio that is more susceptible to the effects of gap risk events due to the idiosyncratic nature of the Net Unsettled Positions in that portfolio. For example, the proposed calculation would address the risk that a gap risk event affects the price of a security in which a portfolio holds a Net Unsettled Position that represents more than a certain percent of the entire portfolio's value, such that the event could impact the entire portfolio's value. The proposed Gap Risk Measure would supplement the calculation of the Core Parametric Estimation because a parametric VaR model calculation is not designed to fully capture this specific risk presented by a concentrated position in a Member's portfolio.

The proposed Gap Risk Measure would only be applied for a Member if the Net Unsettled Position with the largest absolute market value in the portfolio represents more than a certain percent of the entire portfolio's value ("concentration threshold"). NSCC

is proposing a concentration threshold to the application of the Gap Risk Measure because its backtesting results have shown that portfolios with a Net Unsettled Position that represents a proportional value of the entire portfolio over 30 percent tend to have backtesting coverage below the target 99 percent confidence level. These results also show that these portfolios are more susceptible to the effects of gap risk events that the proposed calculation is designed to measure. Therefore, NSCC would only apply the Gap Risk Measure charge if the Net Unsettled Position with the largest absolute market value in a Member's portfolio represents more than 30 percent of that Member's entire portfolio value. NSCC would set 30 percent as the ceiling for the concentration threshold, and would evaluate the threshold periodically based on the Member's backtesting results during a time period of not less than the previous twelve months to determine if it may be appropriate to the threshold at a lower percent.

Additionally, NSCC believes the risk of large, unexpected price movements, particularly those caused by a gap risk event, may have a greater impact on portfolios with large Net Unsettled Positions in securities that are susceptible to those events. Generally, index-based exchange-traded funds track closely to similar equity indices and are less prone to the effects of gap risk events. As such, if the concentration threshold is met, NSCC would calculate the Gap Risk Measure for Net Unsettled Positions in the portfolio, other than positions in index-based exchange traded funds (referred to herein for ease of reference as "non-index Net Unsettled Positions").²⁰

²⁰ NSCC would use a third-party market provider to identify index-based exchange-traded funds. The third-party market provider would identify index-based exchange-traded funds as those with criteria that requires the portfolio returns to track to a broad market index. Exchange-traded funds that do not meet this

When applicable, NSCC would calculate the Gap Risk Measure by multiplying the gross market value of the largest non-index Net Unsettled Position in the portfolio by a percent of not less than 10 percent.²¹ NSCC would determine such percent empirically as no less than the larger of the 1st and 99th percentiles of three-day returns of a set of CUSIPs that are subject to the VaR Charge pursuant to the Rules,²² giving equal rank to each to determine which has the highest movement over that three-day period. NSCC would use a look-back period of not less than ten years that includes a one-year stress period.²³ If the one-year stress period overlaps with the look-back period, only the non-overlapping period would be combined with the look-back period. The result would then be rounded up to the nearest whole percentage.

By calculating this charge as a percent of the gross market value of the largest non-index Net Unsettled Position that exceeds the set threshold, NSCC believes the proposed Gap Risk Measure would allow it to capture the risk that a gap risk event affects the price of a security in which the Member holds a concentrated position and, due to the disproportionate value of this position in the Member's portfolio, the impact of that

criteria would not be considered index-based exchange-traded funds and would be included the Gap Risk Measure calculation.

²¹ NSCC believes it is prudent to set a floor for the Gap Risk Measure charge, and has determined that a floor of 10 percent would appropriately align this charge with the charge that is applied to Net Unsettled Positions in certain securities that are excluded from the VaR Charge and instead charged a similar haircut-based volatility component. See supra note 12.

²² Supra note 12.

²³ NSCC believes using a look-back period of not less than ten years that includes a one-year stress period would provide it with a stable risk measurement that incorporates a sufficient look-back period that would be appropriate for purposes of determining the appropriate percent to use in the calculation of the Gap Risk Measure.

event affects the entire portfolio. This calculation, as an additional measure for the VaR Charge, would permit NSCC to assess an adequate amount of margin to cover the gap risks not captured by the parametric VaR model calculations. As such, the proposed calculation would contribute to NSCC's goal of producing margin levels commensurate with the risks and particular attributes of each Member's portfolio.

In order to implement this proposed change, NSCC would amend Procedure XV of the Rules by creating a new subsection (II) to Sections I(A)(1)(a)(i) and I(A)(2)(a)(i) of the Rules, which would describe the calculation of the Gap Risk Measure.

Portfolio Margin Floor. NSCC is also proposing to introduce the Portfolio Margin Floor as an additional calculation that, when applicable, would be used to determine a Member's final VaR Charge.

The proposed Portfolio Margin Floor would be calculated to address risks that may not be adequately accounted for in the other calculations of the VaR Charge by operating as a floor to, or minimum amount of, the final VaR Charge. A parametric VaR model may result in a low VaR Charge for balanced portfolios. For example, in circumstances where the gross market value of a Member's Net Unsettled Positions is high and the cost of liquidation in the event that Member defaults could also be high, the parametric VaR model may not adequately measure the potential costs of liquidation. The proposed charge would be based on the balance and direction of Net Unsettled Positions in the Members' portfolio and is designed to be proportional to the market value of the portfolio. In this way, the Portfolio Margin Floor would allow NSCC to more effectively cover its credit exposures.

The Portfolio Margin Floor would be the sum of two separate calculations, both of which would measure the market value of the portfolio based on the direction of Net Unsettled Positions in that portfolio. In this way, the calculation would effectively set a floor on the VaR Charge based on the composition of the portfolio and would mitigate the risk that low price volatility in portfolios with either large gross market values or large net directional market values could hinder NSCC's ability to effectively liquidate or hedge the Member's portfolio in three business days.

First, NSCC would calculate the net directional market value of the portfolio by calculating the absolute difference between the market value of the long Net Unsettled Positions and the market value of the short Net Unsettled Positions in the portfolio,²⁴ and then multiplying that amount by a percentage. Such percentage would be determined by examining the annual historical volatility levels of benchmark equity indices over a historical look-back period, as a standard and generally accepted reference that incorporates sufficient data history. Second, NSCC would calculate the balanced market value of the portfolio by taking the lowest market value of either (i) the long Net Unsettled Positions, or (ii) the short Net Unsettled Positions in the portfolio,²⁵ and then multiplying that value by a percentage. Such percentage would generally be a fraction of the percentage used in the calculation of the net directional market value of the portfolio

²⁴ For example, if the market value of the long Net Unsettled Positions is \$100,000, and the market value of the short Net Unsettled Positions is \$200,000, the net directional market value of the portfolio is \$100,000.

²⁵ For example, if the market value of the long Net Unsettled Positions is \$100,000, and the market value of the short Net Unsettled Positions is \$110,000, the balanced market value of the portfolio is \$100,000.

and would be an amount that covers the transaction costs and other basis risks present for the Net Unsettled Positions in that portfolio.²⁶

NSCC would add the results of these two calculations to arrive at the final Portfolio Margin Floor amount. The sum of these two calculations would provide a minimum VaR Charge by effectively establishing a margin floor for certain portfolios that may not be effectively assessed in the other calculations of the VaR Charge. NSCC would compare the Portfolio Margin Floor result with the Gap Risk Measure, when applicable, and the Core Parametric Estimation and would use the highest of the three calculations as the final VaR Charge for each Member, as applicable.

In order to implement this proposed change, NSCC would amend Procedure XV of the Rules by creating a new subsection (III) to Sections I(A)(1)(a)(i) and I(A)(2)(a)(i) of the Rules, which would describe the calculation of the Portfolio Margin Floor.

(iii) Eliminating the MMD Charge

Finally, NSCC is proposing to eliminate the MMD Charge from its Clearing Fund calculation. The MMD Charge is an existing component of the Clearing Fund formula and is calculated for Members that are Market Makers and Members that clear for Market Makers.²⁷ The charge was introduced during a period of rapid growth in the adaptation of the Internet, and was developed to address the risks presented by concentrated positions held specifically by Market Makers. The MMD Charge is described in Procedure XV of the Rules, which provides that, if the Market Maker (either the Member or the correspondent of the Member) holds a Net Unsettled Position that is greater than

²⁶ NSCC would use a third-party market provider to identify these transaction costs and other basis risks.

²⁷ See Procedure XV, Section I(A)(1)(d) of the Rules, supra note 4.

40 percent of the overall unsettled long position (sum of each clearing broker's net long position) in that security in the CNS system, NSCC may impose the MMD Charge.

NSCC calculates the MMD charge as the sum of each of the absolute values of the Net Unsettled Positions in these securities, less the reported amount of excess net capital for that Member.²⁸ The MMD charge is designed to address dominated securities that are susceptible to marketability and liquidation impairment because of the relative size of the Net Unsettled Positions that NSCC would have to liquidate or hedge in the case of Member default.

Since the MMD Charge was implemented, the U.S. equities market has evolved with improved price transparency, access across exchange venues, and participation by market liquidity providers to reduce the risks that the charge was designed to address. Further, NSCC believes the MMD Charge may not effectively address concentration risk because (1) it only applies to Net Unsettled Positions in certain dominated securities, as described above and currently in Procedure XV of the Rules; (2) it does not address concentration risk presented by Net Unsettled Positions in securities that are not listed on NASDAQ or in securities traded by firms that are not Market Makers; and (3) it does not account for concentration in market capitalization categories.

NSCC also believes that the proposed enhancements to the VaR Charge, specifically the introduction of an evenly-weighted volatility measure and the calculation of the Gap Risk Measure, would provide it with more effective measures of risks related to concentrated positions in its Members' portfolios. Subject to applicable thresholds,

²⁸ NSCC does not apply the excess net capital offset for Members rated 7 on the Credit Risk Rating Matrix. See Procedure XV, Sections I(A)(1)(d) and I(A)(2)(c) of the Rules, supra note 4.

these proposed risk measures would be applicable to all Members as part of the calculation VaR Charge, and would not, like the MMD Charge, be limited to positions held by Market Makers. Further, as a threshold-based calculation, the Gap Risk Measure would provide NSCC with a more appropriate measure of the potential risk presented by a large Net Unsettled Position in a portfolio. Therefore, NSCC believes that these proposed enhancements to the VaR Charge and other existing risk management measures (described below) would provide it with more effective measures of the risks presented by concentrated positions, and, as such, it is appropriate to eliminate the MMD Charge.

In order to implement this proposed change, NSCC would amend Procedure XV of the Rules by removing subsection (d) of Section I(A)(1) and subsection (c) of Section I(A)(2) of the Rules, and renumbering the subsequent subsections accordingly.

(iv) Mitigating Risks of Concentrated Positions

For the reasons described above, NSCC believes that the proposed enhancements to its VaR Charge would allow it to better measure and mitigate the risks presented by certain Net Unsettled Positions, including the risk presented to NSCC when those positions are concentrated in a particular security. One of the risks presented by a Net Unsettled Position concentrated in an asset class is that NSCC may not be able to liquidate or hedge the Net Unsettled Positions of a defaulted Member in the assumed timeframe at the market price in the event of a Member default. Because NSCC relies on external market data in connection with monitoring exposures to its Members, the market data may not reflect the market impact transaction costs associated with the potential liquidation as the concentration risk of a Net Unsettled Position increases. However, NSCC believes that, through the proposed changes and through existing risk management

measures,²⁹ it would be able to effectively measure and mitigate risks presented when a Member's Net Unsettled Positions are concentrated in a particular security.

NSCC will continue to evaluate its exposures to these risks. Any future, proposed changes to the margining methodology to address such risks would be subject to a separate proposed rule change pursuant to Section 19(b)(1) of the Act,³⁰ and the rules thereunder, and advance notice pursuant to Section 806(e)(1) of the Clearing Supervision Act,³¹ and the rules thereunder.

Expected Effect on and Management of Risk

NSCC believes that the proposed changes to enhance the calculation of the VaR Charge would enable NSCC to better limit its exposure to Members arising out of their Net Unsettled Positions. The proposal to enhance the calculation of the VaR Charge would enable NSCC to limit its credit exposures posed by portfolios whose risk characteristics are not effectively covered by the current VaR Charge. The proposal to add another calculation of the VaR Charge using the VaR model but incorporating an evenly-weighted volatility measure would permit NSCC to more effectively measure the risk of a rapid change in market price volatility, which may not be adequately covered by

²⁹ For example, pursuant to existing authority under Procedure XV, Sections I(A)(1)(e) and I(A)(2)(d) of the Rules (to be re-numbered pursuant this advance notice to Sections I(A)(1)(d) and I(A)(2)(c) of Procedure XV of the Rules), NSCC may require an additional payment as part of a Member's Required Deposit in the event it observes price fluctuations in or volatility or lack of liquidity of any security that are not otherwise addressed by its VaR Charge or the other components of the Clearing Fund. An example of where this additional payment may be required is in circumstances where NSCC identifies an exposure that is not adequately addressed by its margining methodology. Supra note 4.

³⁰ 15 U.S.C. 78s(b)(1).

³¹ 12 U.S.C. 5465(e)(1).

the calculation that incorporates an EWMA volatility estimation. The addition of the Gap Risk Measure, when applicable, and the Portfolio Margin Floor calculations would provide alternative measurements of the market price volatility of a Member's Net Unsettled Positions, enabling NSCC to assess a VaR Charge that accounts for risks related to gap risk events, and risks related to the unique compositions of securities within a Member's Net Unsettled Positions, respectively and as described in greater detail above. Therefore, by enabling NSCC to calculate and collect margin that more accurately reflects the risk characteristics of securities in its Members' Net Unsettled Positions, the proposal would enhance NSCC's risk management capabilities.

NSCC's proposal to eliminate the MMD Charge would affect NSCC's management of risk by removing a component from the Clearing Fund calculations that has a limited scope, and was designed to address risks related to a Member's concentration risks that would be more adequately addressed by other proposed and existing risk management measures.

By providing NSCC with a more effective measurement of its exposures, as described above, the proposed change would also mitigate risk for Members because lowering the risk profile for NSCC would in turn lower the risk exposure that Members may have with respect to NSCC in its role as a central counterparty.

Consistency with the Clearing Supervision Act

Although the Clearing Supervision Act does not specify a standard of review for an advance notice, its stated purpose is instructive: to mitigate systemic risk in the financial system and promote financial stability by, among other things, promoting

uniform risk management standards for systemically important financial market utilities and strengthening the liquidity of systemically important financial market utilities.³²

Section 805(a)(2) of the Clearing Supervision Act³³ authorizes the Commission to prescribe risk management standards for the payment, clearing and settlement activities of designated clearing entities, like NSCC, and financial institutions engaged in designated activities for which the Commission is the supervisory agency or the appropriate financial regulator. Section 805(b) of the Clearing Supervision Act³⁴ states that the objectives and principles for the risk management standards prescribed under Section 805(a) shall be to, among other things, promote robust risk management, promote safety and soundness, reduce systemic risks, and support the stability of the broader financial system. The Commission has adopted risk management standards under Section 805(a)(2) of the Clearing Supervision Act³⁵ and Section 17A of the Exchange Act (“Covered Clearing Agency Standards”).³⁶ The Covered Clearing Agency Standards require registered clearing agencies to establish, implement, maintain, and enforce written policies and procedures that are reasonably designed to meet certain minimum requirements for their operations and risk management practices on an ongoing basis.³⁷

³² See 12 U.S.C. 5461(b).

³³ 12 U.S.C. 5464(a)(2).

³⁴ 12 U.S.C. 5464(b).

³⁵ 12 U.S.C. 5464(a)(2).

³⁶ See 17 CFR 240.17Ad-22(e).

³⁷ Id.

(i) Consistency with Section 805(b) of the Clearing Supervision Act

For the reasons described below, NSCC believes that the proposed changes in this advance notice are consistent with the objectives and principles of these risk management standards as described in Section 805(b) of the Clearing Supervision Act and in the Covered Clearing Agency Standards.

As discussed above, NSCC is proposing a number of changes to the way it calculates the VaR Charge, one of the components of its Members' Required Deposits – a key tool that NSCC uses to mitigate potential losses to NSCC associated with liquidating a Member's portfolio in the event of Member default. NSCC believes the proposed changes are consistent with promoting robust risk management because they are designed to enable NSCC to better limit its exposure to Members in the event of a Member default.

First, NSCC's proposal to introduce an additional calculation using its parametric VaR model that uses an evenly-weighted volatility estimation would better enable NSCC to limit its exposures to Members by enhancing the calculation of the VaR Charge to better cover the risk of a rapid change in market price volatility levels, including, for example, a drop in portfolio volatility in a stabilizing market. Second, the proposal to introduce the Gap Risk Measure calculation as an additional measure of volatility in connection with the calculation of the VaR Charge would better enable NSCC to limit its exposures to Members by more effectively capturing the risk that gap risk events impact the entire portfolio's value due to the idiosyncratic nature of the Net Unsettled Positions in that portfolio. Third, the proposal to introduce the Portfolio Margin Floor in its calculation of a Member's VaR Charge would enable NSCC to better limit its exposures to Members by better capturing the risks that may not be adequately accounted for in the

other calculations of the VaR Charge. Finally, NSCC's proposal to eliminate the MMD Charge would enable NSCC to remove a component of the Required Deposit that provides NSCC with only a limited measure of risks presented by Net Unsettled Positions that are concentrated in certain securities, which NSCC believes it can more adequately measure through other proposed and existing risk management measures, as described above.

Therefore, because the proposal is designed to enable NSCC to better limit its exposure to Members in the manner described above, NSCC believes it is consistent with promoting robust risk management.

Furthermore, NSCC believes that the changes proposed in this advance notice are consistent with promoting safety and soundness, which, in turn, is consistent with reducing systemic risks and supporting the stability of the broader financial system, consistent with Section 805(b) of the Clearing Supervision Act.³⁸ The proposed changes are designed to better limit NSCC's exposures to Members in the event of Member default. As discussed above, the proposed enhancements to the calculation of the VaR Charge would enable NSCC to view and respond more effectively to market price risk. The proposal to introduce an additional calculation of the VaR Charge using the VaR model that incorporates an evenly-weighted volatility measure, rather than an EWMA volatility estimation, would permit NSCC to more effectively measure the risk of a rapid change in market price volatility. The proposed Gap Risk Measure would provide NSCC with a more appropriate measure of the potential risk presented by a large Net Unsettled Position in a portfolio. The proposed Portfolio Margin Floor would ensure NSCC

³⁸ 12 U.S.C. 5464(b).

collects at least a minimum VaR Charge. Finally, removing the MMD Charge would help ensure the Clearing Fund calculation would not include unnecessary components that have only limited application, particularly where NSCC is able to better address the risks this charge was designed to address through other proposed and existing risk management measures.

By better limiting NSCC's exposures to Members in the event of a Member default, the proposed changes are consistent with promoting safety and soundness, which, in turn, is consistent with reducing systemic risks and supporting the stability of the broader financial system.

(ii) Consistency with Rule 17Ad-22(e)(4)(i) and (e)(6)(i) and (v) under the Act

NSCC believes that the proposed changes are consistent with Rule 17Ad-22(e)(4)(i) and (e)(6)(i) and (v), each promulgated under the Act.³⁹

Rule 17Ad-22(e)(4)(i) under the Act⁴⁰ requires, in part, that NSCC establish, implement, maintain and enforce written policies and procedures reasonably designed to effectively identify, measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes, including by maintaining sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence.

As described above, the proposed changes would enable NSCC to better identify, measure, monitor, and, through the collection of Members' Required Deposits, manage its credit exposures to Members by maintaining sufficient resources to cover those credit

³⁹ 17 CFR 240.17Ad-22(e)(4)(i) and (e)(6)(i) and (v).

⁴⁰ 17 CFR 240.17Ad-22(e)(4)(i).

exposures fully with a high degree of confidence. Each of the additional calculations that NSCC is proposing to introduce to enhance its methodology for calculating a Member's VaR Charge would provide NSCC with a more effective measure of the risks these calculations were designed to assess, as described above. As such, the proposed enhancements to the calculation of the VaR Charge would permit NSCC to more effectively identify, measure, monitor and manage its exposures to market price risk, and would enable it to better limit its exposure to potential losses from Member default. The proposal to use the highest result of each of the calculations as among the Core Parametric Estimation, the Gap Risk Measure and the Portfolio Margin Floor, would enable NSCC to manage its credit exposures by allowing it to collect and maintain sufficient resources to cover those exposures fully and with a high degree of confidence.

Furthermore, removing the MMD Charge would enable NSCC to remove from the Clearing Fund calculations a component that is limited in scope and would allow it to address the risks presented by Net Unsettled Positions that are concentrated in certain securities more effectively by other Clearing Fund components and risk management measures.

Therefore, the proposal would enhance NSCC's ability to effectively identify, measure and monitor its credit exposures and would enhance its ability to maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. As such, NSCC believes the proposed changes are consistent with Rule 17Ad-22(e)(4)(i) under the Act.⁴¹

⁴¹ Id.

Rule 17Ad-22(e)(6)(i) under the Act⁴² requires, in part, that NSCC establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market. Rule 17Ad-22(e)(6)(v) under the Act⁴³ requires, in part, that NSCC establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, at a minimum, uses an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products.

The Required Deposits are made up of risk-based components (as margin) that, that are calculated and assessed daily to limit NSCC's credit exposures to Members. NSCC's proposal to enhance the calculation of its VaR Charge in order to more effectively address market price volatility would permit it to produce margin levels that are commensurate with the particular risk attributes, including risks related to rapid changes in market price volatility levels due to gap risk events, or risks related to a unique composition of securities within a portfolio, as described above. For example, the use of an evenly-weighted volatility estimation utilizing the VaR model, as an additional calculation of the VaR Charge, which gives equal weight to a long historical data set, rather than more weight to recent observations, would permit NSCC to more effectively measure the risk of a rapid change in market price volatility. The addition of the Gap

⁴² 17 CFR 240.17Ad-22(e)(6)(i).

⁴³ 17 CFR 240.17Ad-22(e)(6)(v).

Risk Measure and the Portfolio Margin Floor would also provide NSCC with additional measurements of the market price volatility of a Member's Net Unsettled Position, enabling NSCC to assess a VaR Charge that accounts for the risks those charges are designed to address, as described above.

Finally, NSCC is proposing to eliminate the MMD Charge because this component of the Clearing Fund has only a limited application and, as such, does not provide as effective a measurement of the risk presented by Net Unsettled Positions that are concentrated in certain securities as other proposed and existing risk management measures. Therefore, the proposal to eliminate this charge would enable NSCC to remove an unnecessary component from the Clearing Fund calculation, and would help NSCC to rely on an appropriate method of measuring its exposures to this risk.

The proposed changes are designed to assist NSCC in maintaining a risk-based margin system that considers, and produces margin levels commensurate with, the risks and particular attributes of portfolios that exhibit idiosyncratic risk attributes, are more susceptible to price volatility caused by to gap risk events, and contain concentrated Net Unsettled Positions. Therefore, NSCC believes the proposed change is consistent with Rule 17Ad-22(e)(6)(i) and (v) under the Act.⁴⁴

III. Date of Effectiveness of the Advance Notice, and Timing for Commission Action

The proposed change may be implemented if the Commission does not object to the proposed change within 60 days of the later of (i) the date that the proposed change was filed with the Commission or (ii) the date that any additional information requested

⁴⁴ 17 CFR 240.17Ad-22(e)(6)(i) and (v).

by the Commission is received. The clearing agency shall not implement the proposed change if the Commission has any objection to the proposed change.

The Commission may extend the period for review by an additional 60 days if the proposed change raises novel or complex issues, subject to the Commission providing the clearing agency with prompt written notice of the extension. A proposed change may be implemented in less than 60 days from the date the advance notice is filed, or the date further information requested by the Commission is received, if the Commission notifies the clearing agency in writing that it does not object to the proposed change and authorizes the clearing agency to implement the proposed change on an earlier date, subject to any conditions imposed by the Commission.

The clearing agency shall post notice on its website of proposed changes that are implemented.

The proposal shall not take effect until all regulatory actions required with respect to the proposal are completed.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the Advance Notice is consistent with the Clearing Supervision Act. Comments may be submitted by any of the following methods:

Electronic Comments:

- Use the Commission's Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or

- Send an e-mail to rule-comments@sec.gov. Please include File Number SR-NSCC-2017-808 on the subject line.

Paper Comments:

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549.

All submissions should refer to File Number SR-NSCC-2017-808. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (<http://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the Advance Notice that are filed with the Commission, and all written communications relating to the Advance Notice between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of NSCC and on DTCC's website (<http://dtcc.com/legal/sec-rule-filings.aspx>). All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment

submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-NSCC-2017-808 and should be submitted on or before [insert date 15 days from publication in the Federal Register].

By the Commission.

Eduardo A. Aleman

Assistant Secretary

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